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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/830,480

04/26/2001

Christoph Menzel

RXSD 1003-1

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7590

11/24/2006

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EXAMINER

STRANGE, AARON N

ART UNIT

PAPER NUMBER

2153

DATE MAILED: 11/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/830,480	MENZEL ET AL.	
	Examiner	Art Unit	
	Aaron Strange	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 64-75 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 64-75 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The indicated allowability of claims 64-75 is withdrawn in view of newly discovered references. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 64 and 65 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

4. Claims 64 and 65 fail to produce a “useful, concrete, and tangible result” since the transfer functions are not used for any purpose in the claim.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 66-75 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which

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was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

7. With regard to claim 66, the limitation “wherein said sound processing resources have ... first and second electronic outputs adapted to supply analog voltages representative of sound’ is not enabled by the specification. Nothing describes sound processing resources with multiple outputs. All disclosure and all of the figures describe a sound card with a single output.

Based on dependent claim 67 and page 13, lines 23-25 of the specification, it appears that Applicant may intend to claim multiple audio channels output over a single electronic output. However, multiple channels not claimed and do not provide support for multiple outputs “adapted to supply analog voltages”.

8. Claim 71 is rejected under similar rationale to claim 66, since it also contains limitations directed to multiple outputs of the sound processing resources.

9. All claims not individually rejected are rejected by virtue of their dependency from the above claims.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 64-70 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. With regard to claim 64, the preamble of the claim is misdescriptive, since the body of the claim does not recite steps for conducting a hearing test. At most, the body contains steps for establishing a connection between an end station and a server, and executing two portions of a software program.

13. With regard to claim 66, the preamble of the claim is misdescriptive, since the body of the claim does not recite steps for conducting a hearing test. At most, the body contains steps for calibrating sound processing resources.

14. Claim 66 recites the limitation "the second portion" in line 6. There is insufficient antecedent basis for this limitation in the claim.

15. Claim 67 recites the limitation "the other of the first and second electronic outputs" in line 2. There is insufficient antecedent basis for this limitation in the claim.

16. All claims not individually rejected are rejected by virtue of their dependency from the above claims.

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

18. Claims 71 and 72 are rejected under 35 U.S.C. 102(e) as being anticipated by Kelsey (US 6,232,785).

19. In the interest of expedited prosecution, the Examiner would like to note that there are several “adapted to” limitations in claim 71. These limitations fail to impart patentable weight to the claim since the source/destination of an input/output signal has no effect on the physical structure of the claimed apparatus. Any device with a test signal source, two inputs, an output and a switch connecting the test signal or an input to the output will meet the limitations of the present claim.

20. With regard to claim 71, Kelsey discloses an apparatus for calibrating sound processing resources on an end station using a program executed by the end station, comprising:

a test signal source (tone signal source) (at least Abstract);

a first input adapted to receive electronic inputs representative of sounds from a first output of the sound processing resources (microphone) (at least Abstract);

a second input adapted to receive electronic inputs representative of sounds from a second output of the sound processing resources (female connector) (at least Abstract);

an output adapted to provide electronic outputs representative of sounds to a first input of the sound processing resources (speaker/headphone or male connector) (at least Abstract); and

a switch (S1) to connect the test signal source to the output, and to connect one of the first and second inputs to the output in response to control signals (switch connects the microphone or the tone signal source to the output) (at least Col 2, Line 62 to Col 3, Line 10).

21. With regard to claim 72, Kelsey further discloses that the test signal source comprises a tone generator (test signal source is a tone generator) adapted for connection to the output (at least Abstract) for use in measuring an input transfer function of the sound processing resources.

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. Claims 64-66, 69 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hou (US 6,522,988) in view of Dalton, Jr. et al. (US 6,654,652).

24. With regard to claim 64, Hou discloses a method for conducting a hearing test using a computer program, comprising:

establishing a communication channel between an end station and a server in a communication network (Col 4, Lines 59-64);

executing a first portion of the computer program at the server, wherein the first portion of the computer program includes a component to deliver a second portion of the computer program to the end station from a resource coupled to the communication network (hearing assistant server transmits interface for performing test as well as results information to the local machine)(at least Col 5, Lines 25-27 and Col 13, Lines 59-63); and

executing the second portion of the computer program at the end station, wherein the second portion of the computer program includes logic executed at the end station that selects stimuli in response to user input and presents the selected stimuli (sound signals) to a user at the end station in accordance with a hearing test protocol (hearing test is conducted by user at the local machine)(Col 5, Line 1 to Col 8, Line 48, esp. Col 6, Lines 9-14).

Hou fails to specifically disclose determining an input transfer function and an output transfer function for the sound processing resources.

Dalton discloses a similar system for calibrating sound processing devices to produce sound at a known level. Dalton teaches determining an input and output transfer function of sound processing resources to ensure the accuracy of hearing test conducted using the calibrated sound processing resources (at least Col 3, Lines 17-57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to calibrate the sound processing resources by determining input and output transfer functions to ensure the accuracy of the hearing tests conducted.

25. With regard to claim 65, Dalton further discloses determining the input transfer function and the output transfer function electronically (at least Col 3, Lines 17-57).

26. With regard to claim 66, Hou discloses a method for conducting a hearing test using a computer program, comprising:

establishing a communication channel between an end station and a server in a communication network (Col 4, Lines 59-64);

executing a first portion of the computer program at the server (hearing assistant server transmits interface for performing test as well as results information to the local machine)(at least Col 5, Lines 25-27 and Col 13, Lines 59-63); and

executing the second portion of the computer program at the end station (hearing test is conducted by user at the local machine)(Col 5, Line 1 to Col 8, Line 48, esp. Col 6, Lines 9-14), wherein the end station includes sound processing resources for producing audio signals during the test (soundcard and speaker/headphone/earphone) (at least Col 5, Lines 1-18); and

calibrating the sound processing resources (at least Col 3, Lines 29-36), wherein said sound processing resources have an electronic input adapted to receive analog voltage inputs representative of sound (inherent part of a soundcard, since the soundcard receives voltage inputs from the computer as instructions), and first and second electronic outputs adapted to supply analog voltages representative of sound (speaker(s), earphones and/or headset) (at least Col 5, Line 12-15).

Hou fails to specifically disclose coupling a calibration device to the electronic input and the first and second electronic outputs of the sound processing resources; and using the calibration device to supply a test signal to the electronic input, and feeding back a processed signal output on one of the first and second electronic outputs to the electronic input.

Dalton discloses a device for calibrating sound processing resources that supplies a test signal to the electronic input, and feeds a processed signal output on one of the first and second electronic outputs to the electronic input (at least Col 3, Lines 17-57). This would have been an advantageous addition to the system disclosed by Hou since it would have provided a means for the inputs and outputs of the sound processing resources to be tested and calibrated.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a calibration device such as the one disclosed by Dalton to connect the various inputs/outputs of the sound processing resources and to provide a test signal source.

27. With regard to claims 69 and 70, Dalton further discloses that the test signal comprises a tone output by a voltage controlled oscillator (sinusoidal output on speaker port)(at least Col 17-20), and determining an input transfer function in response to the tone, and then generating the processed signal using the sound processing resources and determining an output transfer function in response to the processed signal and the input transfer function (signal is adjusted until it matches the reference signal and the sound processing resources are calibrated)(at least Col 3, Lines 17-37).

28. Claims 67 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hou (US 6,522,988) in view of Dalton, Jr. et al. (US 6,654,652) in further view of Robbins (US 6,728,167).

29. With regard to claims 67 and 68, while the system disclosed by Hou and Dalton shows substantial features of the claimed invention (discussed above), it fails to disclose supplying control signals to the calibration device using the other of the first and second electronic outputs or that the control signals are DTMF signals.

Robbins discloses a method of controlling a device using DTMF signals. Robbins

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discloses that control signals are encoded on the right channel of a stereo CD. These control signals are intercepted and used to operate the device (at least Col 3, Lines 26-67). This would have been an advantageous addition to the system disclosed by Hou and Dalton since it would have allowed the device to be controlled remotely by control signals embedded in the an audio stream being input to the calibration device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the device disclosed by Hou and Dalton using DTMF control signals since it would have allowed the device to be operated remotely.

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30. Claims 73-75 rejected under 35 U.S.C. 103(a) as being unpatentable over Kelsey (US 6,232,785) in view of Robbins (US 6,728,167).

31. With regard to claims 73-75, Kelsey further discloses that the test signal source comprises a voltage controlled oscillator (at least Col 3, Lines 11-18), and to supply a signal to the output (at least Abstract) for use in measuring an output transfer function of the sound processing resources. However, Kelsey fails to disclose having a control input adapted to be connected to one of the first and second inputs or supplying control signals such as DTMF signals as the control signals for the switch.

Robbins discloses a method of controlling a switch using DTMF signals. Robbins discloses that control signals are encoded on the right channel of a stereo CD. These control signals are intercepted and used to operate a switch (at least Col 3, Lines 26-67). This would have been an advantageous addition to the system disclosed by Kelsey since it would have allowed the switch to be controlled remotely by control signals embedded in the an audio stream being input to the calibration device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the switch in the device disclosed by Kelsey using DTMF control signals since it would have allowed the switch to be operated remotely.


Conclusion

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Strange whose telephone number is 571-272-3959. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AS
11/20/2006


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